

TABLE 2-1

Summary of Federal and State ARARs, and Local Considerations*OU1 Feasibility Study Report — Allied Paper, Inc. /Portage Creek / Kalamazoo River Superfund Site*

Requirement	Citation	Description	ARAR/TBC	Rationale
Federal				
Action-Specific				
Toxic Substances Control Act (TSCA)	15 USC § 2601 to 2692	This regulation establishes prohibitions of, and requirements for, the manufacture, processing, distribution in commerce, use, disposal, storage, and marking of PCBs and PCB Items.	Applicable	Provides clean up levels and disposal requirements for PCB remediation waste including that from Superfund sites. Also allows for a site-specific risk-based evaluation for clean up and disposal.
	40 CFR § 761.61(c)	Allows for cleanup and disposal of PCB remediation waste in a manner other than prescribed in 40 CFR § 761.61(a) or (b)	Applicable	Alternate disposal methods can be approved by USEPA if the remedial alternative does not pose an unreasonable risk of injury to health or the environment. Soil/sediment from OU1 that contain PCB concentrations < 50 ppm and are intended for offsite disposal are not considered PCB remediation waste and are not subject to TSCA.
	40 CFR § 761.65	Bulk PCB remediation waste containing > 50 mg/kg PCBs may be stored onsite for up to 180 days, provided controls are in place for prevention of dispersal by wind or generation of leachate. Storage site requirements include a foundation below the liner, a liner, a cover, and a run-on control system.	Applicable	Storage piles will be designed to meet these requirements for excavated soils with PCB concentrations ≥ 50 mg/kg. An extension on the 180-day storage limit could be obtained if needed through a notification to USEPA per 40 CFR § 761.65 (a).
Clean Water Act (CWA) (See Federal Water Pollution Control Act) and corresponding regulations	33 USC § §1344 40 CFR § 230 33 CFR § 323	Requires approval from USACE for discharge of dredged or fill material into waters of the United States (CWA Section 404 Permit) including the creek, floodplain, or wetland. Provides guidelines to restore and maintain the chemical, physical, and biological integrity of waters of the U.S. by controlling discharge of fill material.	Applicable	See also Section 10 of the Rivers and Harbors Appropriations Act. The substantive requirements of a permit for discharge of dredged materials will be met. Excavation within the creek would constitute discharge of dredged material. . Requirements are likely to include measures to minimize re-suspension of sediments and erosion of sediments during excavation.
	33 USC § §1251 40 CFR § 122 40 CFR § 125	Types of discharges regulated under the CWA include: discharge to surface water (including storm water), direct discharge to a POTW, and	Applicable	Applies to remediation alternatives which treat and/or discharge water. State standards that are more restrictive

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	40 CFR § 136	discharge of dredged or fill material into United States waters. Establishes site-specific pollutant limitations and performance standards which are designed to protect surface water quality. Requires implementation of best management practices to control run-off from construction activities.		than federal criteria become the applicable requirement, consistent with CERCLA 121(d). Best management practices will likely include minimal clearing for grading and equipment operations, erosion and sediment control measures, and structural controls required to control surface water runoff.
	40 CFR § 129	Establishes effluent standards for toxic compounds including PCBs.	Applicable	Applicable for remedial alternatives that would include discharge of water to Portage Creek.
Section 10 of the Rivers & Harbors Appropriation Act of 1899	33 USC § 403	Requires approval from USACE for dredging and filling work performed in a navigable waterway of the U.S. Prohibits creation of any obstructions not affirmatively authorized by Congress to the navigable capacity of any water in the United States.	Applicable	Remedial activities may be conducted in such a way as to avoid obstruction or alteration to Portage Creek channel including removal of material abutting the Portage Creek channel. Nationwide Permit #38 is applicable. Typical substantive requirements of dredging permits include measures to minimize re-suspension of sediments, and minimize effects on natural and historic resources See also Clean Water Act
Criteria For Classification Of Solid Waste Disposal Facilities And Practices	40 CFR § 257	Sets forth criteria for determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment.		These criteria apply to the consolidation of wastes on OU1.

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Criteria for Classification of Solid Waste Disposal Facilities and Practices (RCRA Regulations)	40 CFR § 257	Establishes standards for the management and disposal of solid waste, including: 1) Facility or practices in floodplains will not restrict the flow of base flood, reduce the temporary water storage capacity of the floodplain, or otherwise result in a washout of solid waste; 2) Facility or practices shall not cause discharge of dredged or fill material into waters of the United States; 3) Facility or practice shall not allow uncontrolled public access so as to expose the public to potential health and safety hazards; 4) Covers groundwater monitoring and corrective action requirements under Subpart E and closure and post closure care under Subpart F.	TBC	May be considered as it offers guidance on management and disposal of waste.
Resource Conservation and Recovery Act (RCRA) (see Solid Waste Disposal Act)	42 USC §§ 6901 to 6992k	RCRA addresses solid and hazardous wastes in or on the land; requires the conversion of existing open dumps to facilities which do not pose a danger to the environment or to health.	Applicable	Provides standards for management of solid waste.
Clean Air Act	42 USC §§ 7401 to 7671q	Establishes requirements for sources of hazardous air pollutants such as PCBs; establishes requirements for constituent emission rates in accordance with National Ambient Air Quality Standards.	Applicable	Applies to CERCLA sites that may emit measurable quantities of hazardous air pollutants and particulate matter if threshold values are exceeded. Here there may be a release of a particulate matter and hazardous air pollutants during clearing, grubbing, excavation or cap installation.
		Provides guidelines with respect to minimizing the harmful effects of fugitive dust and airborne contaminants that result from excavation, construction, and other removal activities. Establishes primary and secondary ambient air quality standards for emissions of chemicals and particulate matter.	Applicable	May be appropriate for remedial alternatives that include excavation/removal of residual/ soil.

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Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites	OSWER Directive 9200.4-26	This Directive sets forth policy basis for these recommended levels and prescribes procedures for implementing these recommendations.	TBC	Dioxins are present in surficial soils where sampled. Additional sampling could identify dioxins exceeding recommended levels.
Migratory Bird Treaty Act	16 USC 703–711	Establishes federal responsibility for the protection of the international migratory bird resources. Taking, killing, or possessing migratory birds is unlawful. If migratory birds, their active nests, or eggs are discovered they may not be disturbed or destroyed.	Applicable	The presence of migratory birds will be evaluated and during remedial design and appropriate measures implemented during remedial construction to assure that the cleanup of the Site does not unnecessarily impact migratory birds.
Location-Specific				
Executive Order 11990 – Protection of Wetlands	42 Fed. Reg. 26961 (May 24,1977)	Orders federal agencies to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands when carrying out federally required activities.	TBC	Any dredging, excavation or filling operation, field work disturbing designated wetlands or floodplains are required to adhere to the conditions of the executive orders.
Executive Order 11988 – Floodplain Management	42 Fed. Reg 26951 (May 24, 1977)	Addresses floodplain management and the evaluation by federal agencies of the potential effects of actions they may take in a floodplain to avoid, to the extent possible, adverse effects associated with direct and indirect development of a floodplain.	TBC	Any access roads will be designed to minimize the direct impact of the floodplain and any reuse scenarios considered will be evaluated in accordance with this executive order.
Fish and Wildlife Coordination Act	16 USC §§ 661-667e	Protects fish and wildlife wherever federal actions result in the control or modification of a stream or other body of water; Consultation with the Bureau of Fisheries is performed with the intent of protecting and preserving wildlife. .	Applicable	OU1 is not known to be a habitat for endangered species or wildlife. US Fish and Wildlife Service and Michigan Department of Natural Resources consultations will be performed prior to construction.
Joint regulations on interagency cooperation regarding the Endangered Species Act	16 USC §§ 1531-1544 50 CFR § Part 402	Requires federal agencies to ensure that the continued existence of any endangered or threatened species and their habitats will not be jeopardized by a site action.	Applicable	OU1 is not known to be a habitat for endangered species or wildlife. State and federal consultations will be performed prior to construction.

State

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Action-Specific				
Michigan Natural resources and Environmental Protection Act (NREPA), Public Act 451, Part 31 - Water Resources Protection	MCL 324.3101-3133	Prohibits direct or indirect discharge of a substance that is injurious to public health, recreational use, or aquatic life. Establishes rules specifying standards for several water quality parameters	Applicable	Any remedial action that results in the unacceptable discharge of injurious substances will not be considered effective or complete.
Michigan Public Act 451, Part 115 – Solid Waste Management	MCL 324.11502-22550	Establishes rules for methods of solid waste disposal and for design/operational standards for disposal areas. Describes where Type III landfill standards apply.	Applicable	TSCA allows for offsite disposal of bulk remediation waste with concentrations <50 ppm PCBs in a solid waste landfill.
Michigan Public Act 451, Part 201 – Environmental Remediation	MCL 324.20101 - 20142	Requires that a remedial action shall provide for response activity that will satisfy cleanup criteria; requirements for owner of facility, such as preventing exacerbation and exercising due care; restrictions on transfer of real property designated as a facility, and requirements that if residential criteria are not met, land use restrictions must be provided. Actions required upon approval of remedial action plans, elements of remedial action plans; required action if contaminated soil is moved off-site or relocated within the site.	Applicable	The remedial action implemented must meet generic or site-specific cleanup criteria; Due to existing contamination, property cannot be transferred without notification of land use restrictions that apply to the site. All actions leaving contamination in place must, with county register of deeds, record restrictions on activities that may interfere with the integrity of the remedial action and on activities that may result in unacceptable exposure. Substantive requirements can be met in remedial design documents. For example, by including an aquifer monitoring plan and operation and maintenance plan. Such plans identify points of compliance for judging the effectiveness of the remedial action. Material moved off site must be evaluated to determine if it is subject to Part 111. Required approval to move soil can be attained through MDEQ approval of a

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				Remedial Design.
Michigan Public Act 451, Part 301 - Inland Lakes and Streams	MAC R 299.5520-5540, MAC R 299.51001-51021	Objectives of response activities, determination (or nullification) that a response activity is complete; Required elements of remedial action plans; Requirements for land use restrictions if residential criteria are not met; Liable parties must provide notice to the department and adjacent land owners in certain situations, such as if hazardous substances emanate beyond the property boundary.	Applicable	When the response action is complete, the entity initiating the action has the burden of demonstrating that the action meets all requirements; Substantive requirements can be met in remedial design documents. For example, by including an aquifer monitoring plan and operation and maintenance plan. Such plans identify points of compliance for judging the effectiveness of the remedial action. All actions leaving contamination in place must, with county register of deeds, record restrictions on activities that may interfere with the integrity of the remedial action and on activities that may result in unacceptable exposure.
	MAC R 281.951-965	Regulates dredging or filling of lake or stream bottoms	Applicable	For remedial alternatives involving any fill in the river channel or streambeds, activities may be restricted by these regulations.
Michigan Public Act 451, Part 91 - Soil Erosion and Sediment Control	MCL 324.9101-324.9123a	Requirements for owners of land undergoing an earth change. Establishes rules prescribing soil erosion and sedimentation control plans, procedures, and measures.	Applicable	For any remedial action involving an earth change, liable parties must implement and maintain soil erosion and sedimentation control measures. Substantive requirements of permit must be satisfied.
	MAC R 323.1701-1714	Requirements for owners of land undergoing an earth change. Establishes rules prescribing soil erosion and sedimentation control plans, procedures, and measures.	Applicable	For any remedial action involving an earth change, liable parties must implement and maintain soil erosion and sedimentation control measures. Substantive requirements of permit must be satisfied.

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Michigan Public Act 451, Part 31 - Water Resources Protection	MCL 324.3101-3133	Prohibition of discharge of waste or waste effluent into surface water without approval of the State and establishment of rules; provisions in 3109b allow for mixing zone for discharge of venting groundwater, 310 prohibits filling or grading of a floodplain unless permitted by the State, and 3109b defines when Part 31 remedial obligations are met.	Applicable	. Substantive requirements of a NPDES permit must be attained. For any remedial alternative where waste is left in place, the mixing zone criteria shall not be less protective than for point source discharges. For any remedial alternative meeting the requirements of Part 201, Part 31 requirements are satisfied.
	MAC R 323.1041 - 323.1117; R 323.1171 - 323.1181; R 323.1201 - 323.1221; R 323.1311 - 323.1329; R 323.1701 - 323.1714; R 323.2101-323.2197; R 323.2201 - 323.2240; R 323.2301 - 323.2317; R 323.3001 - 323.3027; R 324.2001 - 324.2009	Prohibition of discharge waste or waste effluent into surface water without approval of the State and establishment of rules	Applicable	Certain remedial alternatives may involve discharge of waters to the Kalamazoo River. Substantive requirements of a NPDES permit must be attained.
Michigan Public Act 451, Part 111- Hazardous Waste Management	MCL 324.11105	Establishes requirements for hazardous waste generators, transporters, and treatment/storage/disposal facilities.	Applicable	Allied Operable Unit is not a TSD facility or a generator. Response activities may generate waste material that may be classified as hazardous waste from former mill operations. Used for characterizing and identifying hazardous wastes and determining appropriate disposal options.
	MAC R 299.9101 -11107	Establishes requirements for hazardous waste generators, transporters, and treatment/storage/disposal facilities.	Applicable	Allied Operable Unit is not a TSD facility or a generator. Response activities may generate waste material that may be classified as hazardous waste from former mill operations. Used for characterizing and identifying hazardous wastes and determining appropriate disposal options.
Michigan Public Act 451, Part 55 - Air Pollution Control	MCL 324.5501-324.5542	Establishes rules prohibiting the emission of air contaminants in quantities which cause injurious effects to human health, animal life, plant life or significant economic value, and/or property.	Applicable	Applicable for remedial alternatives that would generate air emissions (e.g., dust, during excavation, soil stabilization, or compaction) if threshold values are exceeded. For certain remedial alternatives, air emissions must comply with substantive requirements of permits and monitoring would be required.

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	MAC R 336.1101-2706	Establishes rules prohibiting the emission of air contaminants in quantities which cause injurious effects to human health, animal life, plant life or significant economic value, and/or property.	Applicable	Applicable for remedial alternatives that would generate air emissions (e.g., dust, during excavation, soil stabilization, or compaction) if threshold values are exceeded. For certain remedial alternatives, air emissions must comply with substantive requirements of permits and monitoring would be required.
Location-Specific				
Michigan Public Act 451, Part 303 -wetland Protection	MCL 324.30301 - 324.30329	Provides for protection and conservation of wetlands, including establishing rules regarding wetland uses and prohibitions on future use.	Applicable	For certain remedial alternatives, these regulations may limit potential work and/or storage areas and future reuse.
	MAC R 281.921-925, R 281.951-281.961	Provides categories and types of wetlands and corresponding mitigation ratios for impacts to varying types of wetlands, as well as availability of wetland banking	Applicable	Ratios and mitigation requirements may inform decisions about work in wetland areas.
Chemical-Specific				
Michigan Public Act 451, Part 201 – Environmental Remediation	MAC R 299.5701-299.5752	Part 7 Rules: Cleanup Criteria Requirements for Remedial Actions and Interim Response	Applicable	The remedial action implemented must meet generic or site-specific cleanup criteria, applicable to all environmental media and may be used to gauge the success of the remedial action.
Michigan Natural resources and Environmental Protection Act (NREPA), Public Act 451, Part 31 - Water Resources Protection	Michigan Administrative Code (MAC) R 323.1041-1116 (Part 4 Rules)	The Part 4 Rules specify water quality standards which shall be met in all waters of the state. The rules require that all designated uses of the receiving water be protected, including indigenous aquatic life and wildlife.	Relevant and Appropriate	These rules drive the need to reduce contaminant loading to Portage Creek and the Kalamazoo River. Surface water quality standards may be used to assess surface water quality in the vicinity of the Allied Paper Operable Unit and as a means to gauge effectiveness of a remedial action.

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Michigan Public Act 451, Part 201 – Environmental Remediation	MAC R 323.1201-1221 (Part 8, Water Quality-Based Effluent Limit Development for Toxic Substance Rules)	In accordance with federal WPCA and CWA, the Part 8 Rules establish chemical specific water quality-based effluent limits (WQBELs) for point-source discharges.	Applicable	Part 31 and its promulgated rules are to be complied with during environmental remediation conducted pursuant to Part 201. Criteria are applicable to venting groundwater, storm water, and discharge associated with implementing the remedial action.
	MAC R 323.2101-2104, 2136-2140, 2142-2145, 2149, 2152-2155, 2160-2161, 2190 (Part 21, Wastewater Discharge Rules)	The Part 21 Rules establish a waste effluent discharge system compatible with NPDES.	Applicable	Substantive requirements of state discharge permits (including storm water permits) must be attained for remedial actions taking place on site.
	MAC R 323.1311-1329 (Part 13, Floodways and Floodways Rules)	Regulates activities to occupy, fill, or grade lands in a floodplain, streambed, or channel of a stream.	Applicable	The OU lies within the 100-year floodplain. Substantive requirements would need to be met for certain remedial activities
	MCL 324.20101 - MCL 324.20142	Part 201 establishes rules specifying site cleanup criteria, including risk-based cleanup criteria. Requires that remedial action be consistent with cleanup criteria. Generic and site-specific criteria deemed to meet the protectiveness requirement.	Applicable	By statute, the Allied OU is a "facility." Response activities conducted at the site must meet the appropriate state-established protective criteria. If these criteria are attained, the remedial action will be considered protective by MDEQ.
	MAC R 299.5101-5117, R299.5701-5752 Statutorily-required (see MCL 324.20120a(1)(b) criteria found at: http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846_30022-251790_00.html)	Rules provide residential cleanup criteria for soil and groundwater	Applicable	By statute, the Allied OU is a "facility." Response activities conducted at the site must meet the appropriate state-established protective criteria. If these criteria are attained, the remedial action will be considered protective by MDEQ.
	NREPA Part 201 Criteria Tables	Tables for nonresidential and residential soil and groundwater criteria.	Applicable	By statute, the Allied OU is a "facility." Response activities conducted at the site must meet the appropriate state-established protective criteria. If these criteria are attained, the remedial action will be considered protective by MDEQ.

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Local Considerations (which are not ARARs)			
Noise	Chapter 21—Code of the City of Kalamazoo	Secures/promotes the public health, comfort, convenience, safety, and welfare of City residents; promotes peace & quiet.	Certain remedial alternatives may involve machinery that may exceed noise limits for private property without special considerations.
Soil Erosion and Sedimentation Control	Chapter 30 – Code of the City of Kalamazoo	Control soil erosion and sedimentation with respect to earth change activities within the City.	For any remedial action involving an earth change, liable parties must implement and maintain soil erosion and sedimentation control measures. Substantive requirements of permit must be satisfied.
City of Kalamazoo -- Performance Standards for Groundwater Protection within Wellhead Protection Capture Zones and Stormwater Quality Management.	--	Defines technical standards for site development that facilities located within the Capture Zones are required to attain for drinking water source protection and to protect surface water quality by establishing acceptable stormwater quality management strategies throughout the City. Includes best management practices.	OU1 is within one of the City's 5-year time-of-travel capture zones for a well field.
Drinking Water Well Installation	Chapter 19b, Chapter 24b, Chapter 25b, Kalamazoo County Sanitary Code --Chapter 30 – Code of the City of Kalamazoo	Prohibits certain uses of groundwater from wells at properties located in the vicinity of such sites that are the source, or location, of Contaminated Groundwater, or where there is a known threat from Contaminated Groundwater.	OU1 is within a restricted zone, prohibiting any drinking well installation within the area.
Groundwater Sites of Concern, Kalamazoo Township, City of Kalamazoo, City of Parchment, Kalamazoo County, Michigan	--	Location of Restricted zones referred to in Kalamazoo County Sanitary Code, Chapter 19b.	OU1 is within a restricted zone, prohibiting any drinking well installation within the area.

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List of Acronyms:				
ARAR = Applicable or Relevant and Appropriate Requirements			TSCA = Toxic Substances Control Act	
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act			USC = United States Federal Code	
CFR = Code of Federal Regulations			USEPA = U.S. Environmental Protection Agency	
CWA = Clean Water Act			USACE = U.S. Army Corps of Engineers	
GSI = groundwater surface water interface			USDOT = U.S. Department of Transportation	
MAC = Michigan Administrative Code				
MCL = Michigan Compiled Laws				
MDEQ = Michigan Department of Environmental Quality				
mg/kg = milligrams per kilogram				
NPDES = National Pollutant Discharge Elimination System				
OU = operable unit				
PCBs = polychlorinated biphenyls				
POTW = Publicly Owned Treatment Works				
RCRA = Resource Conservation and Recovery Act				
TBC = to be considered				